



## **MARYLAND DEPARTMENT OF THE ENVIRONMENT**

Lead Poisoning Prevention Program

Childhood Blood Lead Surveillance in Maryland

Annual Report 2006

Number and percentage of children tested for lead (1998-2006), with elevated blood lead (EBL), and lead poisoning (1998-2004), with prevalence and incidence cases (2005-2006) by county of residence

Supplementary Data Tables: Supplement # 4



*June 2007*

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**Lead Poisoning Prevention Program: Childhood Lead Registry**

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

**Allegany County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	4,512	1,180	26.2	54	4.6	5	0.4
1999	4,350	1,404	32.3	44	3.1	6	0.4
2000	4,529	1,069	23.6	37	3.5	1	0.1
2001	4,529	1,025	22.6	32	3.1	4	0.4
2002	4,618	1,183	25.6	29	2.5	2	0.2
2003	4,234	1,315	31.1	30	2.3	5	0.4
2004	4,747	1,329	28.0	24	1.8	3	0.2
				Prevalence Cases		Incidence Cases	
2005	4,821	1,037	21.5	32	3.1	25	2.4
2006	4,904	1,172	23.9	22	1.9	17	1.5

**Anne Arundel County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	38,174	4,496	11.8	104	2.3	2	0.1
1999	38,064	4,676	12.3	60	1.3	4	0.1
2000	39,998	4,893	12.2	51	1.0	3	0.1
2001	39,998	5,221	13.1	40	0.8	3	0.1
2002	40,257	5,944	14.8	30	0.5	4	0.1
2003	40,844	5,029	12.3	20	0.4	1	0.0
2004	41,895	6,806	16.2	27	0.4	6	0.1
				Prevalence Cases		Incidence Cases	
2005	42,575	6,631	15.6	20	0.3	18	0.3
2006	43,306	6,422	14.8	20	0.3	16	0.2

**Baltimore County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	53,541	6,645	12.4	211	3.2	11	0.2
1999	52,040	7,129	13.7	173	2.4	19	0.3
2000	54,630	7,882	14.4	143	1.8	16	0.2
2001	54,630	7,090	13.0	99	1.4	6	0.1
2002	55,444	10,499	18.9	148	1.4	12	0.1
2003	54,933	10,427	19.0	120	1.2	18	0.2
2004	57,205	14,947	26.1	108	0.7	10	0.1
				Prevalence Cases		Incidence Cases	
2005	58,150	14,505	24.9	110	0.8	84	0.6
2006	59,148	15,344	25.9	85	0.6	69	0.4

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

Lead Poisoning Prevention Program: Childhood Lead Registry

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

**Baltimore City**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	56,967	17,750	31.2	3,949	22.2	669	3.8
1999	55,401	17,414	31.4	2,902	16.7	446	2.6
2000	50,380	18,033	35.8	2,198	12.2	266	1.5
2001	50,380	21,231	42.1	2,027	9.5	230	1.1
2002	52,744	16,595	31.5	1,558	9.4	183	1.1
2003	51,892	18,242	35.2	1,166	6.4	160	0.9
2004	52,796	18,970	35.9	1,183	6.2	147	0.8
				Prevalence Cases		Incidence Cases	
2005	53,626	17,943	33.5	854	4.8	534	3.0
2006	54,547	18,363	33.7	843	4.6	573	3.1

**Calvert County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	5,980	385	6.4	6	1.6	1	0.3
1999	6,206	388	6.3	2	0.5	0	0.0
2000	6,222	625	10.0	5	0.8	0	0.0
2001	6,222	785	12.6	8	1.0	1	0.1
2002	6,252	899	14.4	8	0.9	2	0.2
2003	6,209	682	11.0	2	0.3	0	0.0
2004	6,504	838	12.9	0	0.0	0	0.0
				Prevalence Cases		Incidence Cases	
2005	6,623	753	11.4	7	0.9	6	0.8
2006	6,737	749	11.1	9	1.2	9	1.2

**Caroline County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	2,516	363	14.4	39	10.7	4	1.1
1999	2,534	371	14.6	43	11.6	11	3.0
2000	2,275	387	17.0	34	8.8	3	0.8
2001	2,275	513	22.5	39	7.6	4	0.8
2002	2,168	699	32.2	48	6.9	3	0.4
2003	2,270	796	35.1	14	1.8	3	0.4
2004	2,379	794	33.4	17	2.1	1	0.1
				Prevalence Cases		Incidence Cases	
2005	2,422	849	35.1	11	1.3	10	1.2
2006	2,463	893	36.3	7	0.8	3	0.3

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

Lead Poisoning Prevention Program: Childhood Lead Registry

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

**Carroll County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	12,319	630	5.1	30	4.8	3	0.5
1999	12,430	678	5.5	21	3.1	1	0.1
2000	12,376	1,182	9.6	22	1.9	3	0.3
2001	12,376	970	7.8	17	1.8	0	0.0
2002	11,888	978	8.2	10	1.0	1	0.1
2003	11,801	1,040	8.8	14	1.3	2	0.2
2004	12,938	1,323	10.2	13	1.0	1	0.1
				Prevalence Cases		Incidence Cases	
2005	13,173	1,460	11.1	5	0.3	3	0.2
2006	13,400	1,378	10.3	7	0.5	5	0.4

**Cecil County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	6,842	379	5.5	23	6.1	0	0.0
1999	6,975	368	5.3	19	5.2	3	0.8
2000	7,212	1,337	18.5	16	1.2	2	0.1
2001	7,212	964	13.4	8	0.8	2	0.2
2002	7,104	1,018	14.3	9	0.9	2	0.2
2003	7,127	959	13.5	9	0.9	2	0.2
2004	7,548	1,073	14.2	6	0.6	0	0.0
				Prevalence Cases		Incidence Cases	
2005	7,677	1,046	13.6	7	0.7	6	0.6
2006	7,808	1,058	13.5	6	0.6	6	0.6

**Charles County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	10,866	959	8.8	14	1.5	4	0.4
1999	11,110	1,033	9.3	12	1.2	0	0.0
2000	10,533	414	3.9	3	0.7	1	0.2
2001	10,533	1,597	15.2	10	0.6	1	0.1
2002	10,812	1,790	16.6	8	0.4	0	0.0
2003	11,023	1,391	12.6	2	0.1	0	0.0
2004	11,019	2,040	18.5	9	0.4	1	0.0
				Prevalence Cases		Incidence Cases	
2005	11,212	1,811	16.2	7	0.4	6	0.3
2006	11,404	1,919	16.8	1	0.1	1	0.1

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**Lead Poisoning Prevention Program: Childhood Lead Registry**

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

<b>Dorchester County</b>							
Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	2,191	319	14.6	46	14.4	10	3.1
1999	2,184	406	18.6	60	14.8	3	0.7
2000	2,011	394	19.6	51	12.9	1	0.3
2001	2,011	248	17.3	44	12.6	5	1.4
2002	1,902	513	27.0	36	7.0	5	1.0
2003	1,952	540	27.7	26	4.8	5	0.9
2004	2,106	629	29.9	17	2.7	1	0.2
				Prevalence Cases		Incidence Cases	
2005	2,141	609	28.5	11	1.8	8	1.3
2006	2,177	684	31.4	11	1.6	8	1.2

<b>Frederick County</b>							
Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	15,671	956	6.1	25	2.6	2	0.2
1999	16,040	977	6.1	19	1.9	4	0.4
2000	17,072	1,550	9.1	19	1.2	0	0.0
2001	17,075	1,335	7.8	14	1.0	1	0.1
2002	17,434	1,584	9.1	22	1.4	2	0.1
2003	17,641	1,630	9.2	16	1.0	2	0.1
2004	17,865	2,796	15.7	22	0.8	2	0.1
				Prevalence Cases		Incidence Cases	
2005	18,172	3,019	16.6	14	0.5	11	0.4
2006	18,484	3,108	16.8	10	0.3	7	0.2

<b>Garrett County</b>							
Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	2,202	241	10.9	4	1.7	0	0.0
1999	2,106	237	11.3	2	0.8	0	0.0
2000	2,222	287	12.9	6	2.1	0	0.0
2001	2,222	283	12.7	4	1.4	0	0.0
2002	2,046	297	14.5	3	1.0	0	0.0
2003	2,020	429	21.2	3	0.7	0	0.0
2004	2,323	563	24.2	7	1.2	3	0.5
				Prevalence Cases		Incidence Cases	
2005	2,365	532	22.5	4	0.8	3	0.6
2006	2,406	495	20.6	5	1.0	3	0.6

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**Lead Poisoning Prevention Program: Childhood Lead Registry**

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

**Harford County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	18,929	1,072	5.7	38	3.5	9	0.8
1999	18,818	1,312	7.0	21	1.6	1	0.1
2000	19,138	1,384	7.2	20	1.4	1	0.1
2001	19,138	1,924	10.1	16	0.8	1	0.1
2002	18,530	2,216	12.0	26	1.2	2	0.1
2003	18,482	2,674	14.5	19	0.7	2	0.1
2004	20,032	3,170	15.8	24	0.8	3	0.1
				Prevalence Cases		Incidence Cases	
2005	20,371	2,939	14.4	17	0.6	14	0.5
2006	20,721	3,041	14.7	15	0.5	14	0.5

**Howard County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	20,043	977	4.9	18	187	6	0.6
1999	20,683	1,102	5.3	17	1.5	2	0.2
2000	22,252	1,083	4.9	15	1.4	1	0.1
2001	22,252	1,348	6.1	13	1.0	0	0.0
2002	22,090	1,796	8.1	16	0.9	2	0.1
2003	22,193	1,688	7.6	8	0.5	2	0.1
2004	23,278	2,338	10.0	13	0.6	1	0.0
				Prevalence Cases		Incidence Cases	
2005	23,686	2,273	9.6	7	0.3	4	0.2
2006	24,092	2,188	9.1	8	0.4	6	0.3

**Kent County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	1,302	322	24.7	14	4.3	3	0.9
1999	1,257	333	26.5	24	7.2	1	0.3
2000	1,094	408	37.3	13	3.2	0	0.0
2001	1,091	299	27.3	2	0.7	0	0.0
2002	1,095	149	13.6	1	0.7	0	0.0
2003	1,041	157	15.1	3	1.9	0	0.0
2004	1,144	208	18.2	6	2.9	4	1.9
				Prevalence Cases		Incidence Cases	
2005	1,164	172	14.8	2	1.2	2	1.2
2006	1,184	257	21.7	4	1.6	4	1.6

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

Lead Poisoning Prevention Program: Childhood Lead Registry

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

**Montgomery County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	69,016	8,044	11.7	101	1.3	7	0.1
1999	68,975	9,098	13.2	95	1.0	11	0.1
2000	72,419	10,646	14.7	74	0.7	12	0.1
2001	72,419	12,148	16.8	66	0.5	3	0.0
2002	75,588	12,082	16.0	61	0.5	8	0.1
2003	76,648	10,163	13.3	53	0.5	9	0.1
2004	75,867	15,934	21.0	81	0.5	12	0.1
				Prevalence Cases		Incidence Cases	
2005	77,085	16,353	21.2	65	0.4	55	0.3
2006	78,408	17,411	22.2	53	0.3	48	0.3

**Prince George's County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	66,357	10,176	15.3	131	1.3	12	0.1
1999	65,986	10,544	16.0	117	1.1	17	0.2
2000	70,191	12,792	18.2	153	1.2	29	0.2
2001	70,191	13,735	19.6	100	0.7	7	0.1
2002	73,365	14,930	20.4	98	0.7	10	0.1
2003	73,788	12,426	16.8	77	0.6	7	0.1
2004	73,498	19,785	26.9	87	0.4	16	0.1
				Prevalence Cases		Incidence Cases	
2005	74,714	17,906	24.0	68	0.4	61	0.3
2006	75,996	18,561	24.4	71	0.4	66	0.4

**Queen Anne's County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	3,066	265	8.6	18	6.8	1	0.4
1999	3,150	296	9.4	7	2.4	0	0.0
2000	3,163	326	10.3	11	3.4	1	0.3
2001	3,163	312	9.9	7	2.2	0	0.0
2002	3,079	444	14.4	7	1.6	1	0.2
2003	3,123	495	15.8	5	1.0	2	0.4
2004	3,312	453	13.7	4	0.9	0	0.0
				Prevalence Cases		Incidence Cases	
2005	3,367	484	14.4	0	0.0	0	0.0
2006	3,425	659	19.2	4	0.6	4	0.6

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

Lead Poisoning Prevention Program: Childhood Lead Registry

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

**Saint Mary's County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	8,495	351	4.1	6	1.7	0	0.0
1999	8,625	620	7.2	8	1.3	0	0.0
2000	7,652	817	10.7	10	1.2	0	0.0
2001	7,652	1,046	13.7	11	1.1	0	0.0
2002	7,533	1,059	14.1	10	0.9	0	0.0
2003	7,827	903	11.5	9	1.0	0	0.0
2004	8,006	1,390	17.4	2	0.1	0	0.0
				Prevalence Cases		Incidence Cases	
2005	8,145	1,381	17.0	10	0.7	9	0.7
2006	8,285	1,517	18.3	11	0.7	11	0.7

**Somerset County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	1,395	314	22.5	41	13.1	7	2.2
1999	1,377	270	19.6	26	0.3	2	0.7
2000	1,441	349	24.2	25	7.2	5	1.4
2001	1,441	539	37.4	48	8.9	2	0.4
2002	1,461	512	35.0	21	4.1	0	0.0
2003	1,457	544	37.3	18	3.3	5	0.9
2004	1,508	477	31.6	10	2.1	3	0.6
				Prevalence Cases		Incidence Cases	
2005	1,534	488	31.8	8	1.6	3	0.6
2006	1,560	506	32.4	9	1.8	5	1.0

**Talbot County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	2,240	194	8.7	13	6.7	0	0.0
1999	2,243	275	12.3	10	3.6	2	0.7
2000	2,148	288	13.4	19	6.6	0	0.0
2001	2,148	369	17.2	30	8.1	4	1.1
2002	2,173	441	20.3	19	4.3	4	0.9
2003	2,111	449	21.3	15	3.3	1	0.2
2004	2,244	488	21.7	6	1.2	0	0.0
				Prevalence Cases		Incidence Cases	
2005	2,286	573	25.1	2	0.3	2	0.3
2007	2,326	636	27.3	5	0.8	5	0.8



**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

Lead Poisoning Prevention Program: Childhood Lead Registry

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

**Washington County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	9,244	536	5.8	25	4.7	2	0.4
1999	9,060	676	7.5	20	3.0	5	0.7
2000	9,784	1,558	15.9	21	1.3	0	0.0
2001	9,784	1,558	15.9	24	1.5	4	0.3
2002	9,552	1,500	15.7	19	1.3	4	0.3
2003	9,737	1,971	20.2	15	0.8	3	0.2
2004	10,252	3,029	29.5	39	1.3	10	0.3
				Prevalence Cases		Incidence Cases	
2005	10,414	3,235	31.1	21	0.6	18	0.6
2006	10,593	3,012	28.4	18	0.6	15	0.5

**Wicomico County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	6,293	919	14.6	91	9.9	14	1.5
1999	6,240	903	14.5	92	10.2	8	0.9
2000	6,424	1,035	16.1	81	7.8	3	0.3
2001	6,424	1,463	22.8	134	9.2	6	0.4
2002	6,714	1,747	26.0	74	4.2	9	0.5
2003	6,594	2,031	30.8	50	2.5	7	0.3
2004	6,736	1,917	28.5	40	2.1	4	0.2
				Prevalence Cases		Incidence Cases	
2005	6,838	2,096	30.7	29	1.4	18	0.9
2006	6,955	2,440	35.1	22	0.9	16	0.7

**Worcester County**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	3,036	441	14.5	30	6.8	0	0.0
1999	3,058	427	14.0	33	7.7	2	0.5
2000	2,773	504	18.2	27	5.4	3	0.6
2001	2,773	595	21.5	48	8.1	4	0.7
2002	2,968	542	18.3	34	6.3	4	0.7
2003	3,022	731	24.2	24	3.3	1	0.1
2004	2,904	675	23.2	11	1.6	2	0.3
				Prevalence Cases		Incidence Cases	
2005	2,952	696	23.6	6	0.9	3	0.4
2006	3,002	962	32.0	7	0.7	5	0.5

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

**Lead Poisoning Prevention Program: Childhood Lead Registry**

Number and percentage of children 0-72 months with elevated blood lead level and lead poisoning  
by jurisdiction: 1998-2006

**County Unknown**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998		668		37		0	
1999		588		74		4	
2000		5,273		357		2	
2001		41		0		0	
2002		90		2		0	
2003		9		1		0	
2004		3,577		55		0	
				Prevalence Cases		Incidence Cases	
2005		357		14		13	
2006		199		21		20	

**Statewide**

Calendar Year	Population	Blood Lead Tests		Elevated Blood Lead		Lead Poisoning	
		Number	Percent	Number	Percent	Number	Percent
1998	421,197	58,585	13.9	5,068	8.6	772	1.3
1999	418,912	61,529	14.7	3,904	6.3	555	0.9
2000	427,939	74,516	17.4	3,402	4.6	353	0.5
2001	427,939	76,742	17.9	2,841	3.7	288	0.4
2002	436,817	79,507	18.2	2,297	2.9	260	0.3
2003	437,968	76,721	17.5	1,719	2.2	237	0.3
2004	448,106	105,549	23.6	1,811	1.7	230	0.2
				Prevalence Cases		Incidence Cases	
2005	455,514	99,148	21.8	1,331	1.3	916	0.9
2006	463,331	102,974	22.2	1,274	1.2	936	0.9

Terms and definitions

1. Population of children for 1998-1999 was extracted from the US Census Bureau single age-sex-county specific population estimate (1991-1999). The 2000 and 2001 populations are based on the Census 2000 population count. The Census Bureau had not released population estimate for 2001 when 2001 Annual Report was released. The 2002 and 2003 populations are adapted from the US Census Bureau five-year age-sex-county specific population estimate for 2002 and 2003. The 2004, 2005, and 2006 populations are adapted from US Census Bureau age-sex population projection at the state level for 2004, 2005, and 2006.
2. Elevated blood lead level (EBL) is defined as a venous or a capillary blood lead level  $\geq 10$   $\mu\text{g/dL}$
3. Lead poisoning is defined as a venous blood lead level  $\geq 20$   $\mu\text{g/dL}$ .
4. For 2005 forward the term "Prevalence" is introduced based on number of children with blood lead level  $\geq 10$   $\mu\text{g/dL}$  who may have one or more EBL in the past, and term "Incidence" is introduced based on number of children with the very first EBL in that calendar year.
5. County assignment for 1998-2001 is based on child's zip code address. In the absence of any information; the provider's zip code was the basis of county determination. For 2002 and 2003, the child's census tract was the first order of priority to assign county, followed by child's zip code address, and the provider's zip code address as the last. For 2004 forward county assignment is based on child's census tract or zip code of the address. Reports with no addresses were assumed to be from Maryland children with county unknown.